Clinical Section

Errors in Surgery

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Consulting Surgeon, Winnipeg General Hospital
Presented at the meeting of the Winnipeg Medical Society March 20th, 1942

Surgery would be most uninteresting were its science and art so exact that error would be impossible. However, surgery is not so standardized that mistakes cannot be made. Furthermore, there would still be the human element to account for error in the idiosyncrasies of the surgeon and the anomalies in the patient. Nevertheless, it can be said that surgery in this day and age has fairly well passed the stage of "trial and error."

Reporting his mistakes is not to the personal advantage of the surgeon, it is more to his advantage to report his successes. It is said, when the Duke of Wellington was asked—to what he most owed his success — he replied, "To the quickness with which I covered up my mistakes". Apparently, mistakes will occur in every form of human endeavor, but they can and must be reduced to the lowest possible degree in the practice of surgery.

Of what value would there be in detailing a number of surgical errors were it not for the purpose of profiting by it, thus affording an opportunity of broadening our knowledge and our vision and clarifying our judgment, thereby, insuring against repetition?

Surgical errors can be attributed to: (1) Inadequate knowledge; (2) Bad judgment, and (3) Faulty technique. My observations convince me that errors occur in indirect ratio to the amount of training one has received. Surgery requires special training of the most exacting kind. It would seem to be necessary that a minimum standard of post-graduate work should be demanded of those who undertake operative surgery. If the medical profession does not make its own standards we may find sooner or later that standards have been made for us.

Surgical judgment ripens slowly. The would-be surgeon, however, should have a certain in-born intuitiveness or sagacity that is difficult to define. It engenders caution without fear, and gives a warning or a sense of danger in time so that safeguards can be taken before catastrophe has actually happened. I think Sir Fredrick Treves must have had this in mind when he said, "Surgeons are born not made". However, they have to be made as well.

Surgical technique should be learned on the cadaver and tried out on dogs or monkeys before being practiced on the living human body.

There is an old saying, and I know of no better adage for the young surgeon to ponder over, "Fools learn by experience but wise men learn

from observation," so I have chosen a few mistakes to present to you that have come under—my observation.

Errors in Diagnosis and Failures to Diagnose

Errors in diagnosis obviously lead to errors in treatment.

The surgical lesions that cannot be diagnosed with our present knowledge and diagnostic resources are few. Diagnosis in a difficult case is a matter of taking the necessary time and studying all the possibilities.

But what have we to say of those who will not examine their patients?

Here are three examples. In one year two patients consulted me for bowel trouble. The normal bowel action had undergone change and they had noticed blood in the stools. Both these men had been treated by the same doctor for nearly a year for piles. When seen by me one had enlarged malignant glands in both groins and the rectum was full of carcinoma. The other had a large malignant mass in the rectum within easy reach of the finger. Neither had had any attempt made at diagnosis, not even a digital examination.

The third example was that of a female patient who consulted a doctor about diarrhoea and the passing of blood per rectum. He treated her for colitis without examination for over three months. The condition was cancer of the recto sigmoid.

Here is a very interesting case that had two exploratory laparotomies without a diagnosis being made.

This difficult case was referred to me by a noted surgeon of an Eastern Canadian city. The patient was a young healthy looking woman aged 30. Her complaints were attacks of epigastric pain, nausea and vomiting which had persisted for a period of two years. An enlargement could be felt in the upper mid-abdomen. The surgeon had explored the mass through an anterior abdominal incision and found a large nodular tumour behind the stomach and transverse colon and apparently retro-peritoneal. The incision was closed. Some days later he made a posterior approach through a left subcostal incision to obtain, if possible, a biopsy specimen, but apparently did not succeed. His conclusion was that the mass was malignant. However, when the patient came under my care she seemed in such good general condition that I doubted the diagnosis of a malignant growth of such large proportions.

A very thorough and complete investigation was instituted, and the only outstanding findings were: (1) Enlargement of the duodenal curvature shown in the X-ray plate after a barium meal, and (2) a low sugar tolerance.

A diagnosis of pancreatic tumour, probably a cyst, was made. This diagnosis was confirmed by operation, which I did. Fluid was found with the exploring needle and the cyst drained. The patient had three operations where only one was necessary.

Here are two of my own mistakes:

A large healthy looking middle-aged woman came to me complaining of bowel trouble. Her past history and secondary complaints were nil. She said she had not been ill a day in her life. General physical examination was negative throughout. The record, however, showed pus in the urine. The specimen had not been catheterized and there being no urinary complaints, no further consideration was given the matter. Sigmoidoscopic examination and biopsy revealed cancer of the recto-sigmoid section of the large bowel.

The first-stage of an abdomino-perineal resection was done, the patient apparently making a normal recovery. However, following the operation no urine was passed, although every measure had been taken to restore this function, and she died on the 9th post-operative day.

An autopsy showed both kidney pelves filled with so-called "Staghorn" renal stones and pus. The malignancy had spread to the liver, though it could not be palpated, and lymph glands were involved with cancer cells.

Before any operation, whether it be major or minor, is undertaken the patient should have a complete general examination and the slightest deviation from the normal given due consideration. In Medical Practice nothing should be taken for granted. It is clear this case should have been further considered.

The second case was one of injury to the common bile duct followed by jaundice. This misfortune occurred when cholecystectomy in lieu of cholecystostomy was coming into vogue. It was a fault of technique which I shall discuss later. Such an accident should never occur and, I say this, in spite of Professor Watson's recent gracious remarks that the surgeon should be pardoned if he did on occasion injure the common bile duct.

And here is one for the house surgeons: A female patient in the hospital was having intravenous transfusions of saline and glucose. The day following one of these the skin for several inches about the site of the injection became red and inflamed. The house-surgeon who gave the

next transfusion not heeding the redness—a danger signal—introduced the needle into the same arm. The patient died of septicemia. It was a case of lack of intuition and sagacity on the part of the young doctor. Obviously he should have used the other arm.

A hollow needle forced through the skin carries with it into the deeper tissues a core of epithelium. As is well known, a culture can be made from the skin after any form of disinfection. Therefore, a potential source of infection is ever present. When a needle larger that a fine hypodermic is used for injection a tiny stab opening should be made in the skin to allow the needle to pass without scraping epithelium with it, thus obviating this possible danger.

A little wheal of local anaesthesia made with a fine hypodermic needle and a small skin puncture with a fine pointed scalpel makes the procedure safe and painless.

Here are two cases from the literature:

The late Lord Moynihan (then Sir Berkeley Moynihan, Abdominal Operations, Vol. II, 4th Edition, Page 585, 1926) relates the following: "The most interesting case in my series concerned a female patient aged thirty-five, who had suffered from jaundice of the acholuric type for thirteen years. Three operations had been performed before I saw the patient. At the first 312 stones had been removed from the gall-bladder. As the jaundice continued a second operation was undertaken and the gall-bladder was anastomosed to the duodenum. The jaundice still remained, and at a third operation the anastomotic opening was greatly enlarged. The jaundice still continued and the surgeon in whose care the patient was, asked if I would operate upon her again for a retroperitoneal sarcoma on the left side. I wrote to say that I should be happy to operate and remove the spleen! I did so, and within a week the jaundice had gone."

It is well known that acholuric jaundice is associated with gall stones in over 50% of cases.

The second case is one reported by Max Thorek (Max Thorek, M.D., Surgical Errors and Safeguards, Page 4), who remarks thus: "Different persons react differently to the same surgical operation, and even the same person at different times, according to the variations in vital resources.

"To illustrate: I recall the case of a woman aged 40, who was operated upon for a fibromyoma of the uterus. The operation was a severe one, yet the patient made an uneventful recovery. While convalescing in the hospital she urged me to repair her lacerated perineum. I acquiesced, arguing that I could find no reason for fearing a simple perineoplasty in a patient who had withstood a supra-vaginal hysterectomy so well. At the end of three weeks the perineum was repaired; the operation lasting about twenty minutes. Everything went well, but the

patient never rallied, and death occurred on the third day after the operation, in spite of every effort to save her life. No cause for her demise could be found in a thorough necropsy. I must, therefore, conclude that the ordeal was too much for her powers of resistance."

Errors in Technique

At Tuxedo Military Hospital during the last war I had a patient in the wards with a sinus in his left side following a nephrectomy, performed seven months previously for a tuberculous kidney. This sinus might have been due to a tuberculous infection in the wound but there was no evidence of this. The record showed that the renal pedicle had been tied with silk. By gently enlarging the sinus I was able to grasp the silk ligature with a forcep and remove it. The wound healed completely in one month. The patient had had seven months hospitalization where one should have done.

If the surgeon felt he should use silk in preference to catgut he could have brought the end of the ligature out of the wound to be removed when it had loosened and the danger of haemorrhage had passed.

This, of course, raises the vexed question of using buried silk versus catgut.

The Lost Sponge:

On one occasion I had the experience of removing a sponge from the abdomen of a doctor's wife. It reminded me of a warning I heard a professor of surgery in Vienna give, "When you are operating on a doctor, or one of his family, you should be ten times as careful as when operating on an ordinary individual."

The Forgotten Sponge:

A patient came in from a rural town complaining of a foul vaginal discharge. Some months before she had had a vaginal operation. A gauze pack had been left in the vagina. When removing it I sent the nurse out for something and before she returned the sponge was removed and out of sight.

The Missing Sponge:

When the nurse reports a sponge missing this is most serious. One may feel that he is sure no sponge has been left in the abdomen. I was attending a clinic in a large American centre watching one of the most noted and most skilful surgeons on the continent operating on a pelvic case (tubo-overian abcess). A large gauze wipe was place in the pouch of Douglas. There was no tape or ring or forcep attached to it. The wipes and sponges were supposedly all removed and the peritoneum was half closed when the nurse reported a sponge missing. The surgeon inserted his hand and thoroughly explored the abdomen for the missing sponge. The

nurse checked her count—11, not 12. He felt again but did not find the missing sponge and proceeded to close the abdomen when someone whispered to the assistant that a sponge had been placed in the cul de sac. The assistant whispered to the surgeon, who removed it and the tension that overshadowed the situation, was relieved.

The Lost Drainage Tube:

A patient, who had had an empyema, drained in a rural Municipal Hospital 6 months previously came to me complaining that the discharge had persisted and the wound was still open. Empyemas sometimes are very slow in closing as the lung is so fixed by the thickened pleura that it cannot expand and the chest wall cannot collapse until the overlying ribs have been removed (Eslander Operation). In this case an X-ray plate revealed a large rubber drainage tube, 5 or 6 inches long, in the empyema cavity. No safety pin was attached to it.

For the drainage of an empyema cavity there is no tube more satisfactory, that I know of, than the Pollard Empyema tube. These tubes are made in different lengths to suit the thickness of the chest wall. A rubber flange is secured to each end, a smaller one for inside the chest and a larger one for the outside. Thus the tube resembles somewhat a spool and can neither slip into the chest cavity or out of the chest wall. Moreover, a large tube in the pleural cavity promotes fibrous thickening, prevents the expansion of the lung, and the early closing of the pleural cavity which is the desired aim of the localized empyema drainage.

A tube inserted for drainage of the gall bladder or for drainage of the urinary bladder should be secured so that it can neither slip in nor slip out. If a tube inserted into either of these organs should be pulled out by an unruly patient or slip out soon after an operation, before a sinus has formed, it will be quite difficult to reinsert, and not without danger of entering the peritoneal cavity.

Gall Bladder, Appendix, and Spleen:

We see from time to time jaundiced patients, this condition having followed a few days after a cholecystectomy, there being no history of jaundice antedating the operation. This invariably means operative damage of the common bile duct. Such an accident is one of the gravest in surgery and should never occur.

There are two ways of removing the gall bladder, one by dissecting it out from above, beginning at the fundus and freeing it from its bed in the gall bladder fissure of the liver: the other, by commencing at the cystic duct, exposing it, and after ligating the duct dissecting the gall bladder from below outward to the fundus.

In exposing the cystic duct the peritoneum over it must be cleared away after dividing the

latter just below Hartmann's pouch so that there is not a shadow of doubt as to its identity. If there is any doubt, it were better to stop and reverse the procedure, dissecting from the fundus down to the duct as first mentioned.

It is erroneus teaching, as I have seen in text books, to force a forcep through the peritoneum blindly under the cystic duct. The duct should first be exposed and plainly seen.

Now, all this seems quite simple but the anatomy can be so distorted by the pathology present that structures are difficult to define. I have seen the gall bladder, cystic, and upper part of the common duct so distended with stones as to appear to be all gall bladder and the surrounding tissues are often thickened and oedematous from inflammation. Moreover, Dr. I. M. Thompson (Professor of Anatomy, University of Manitoba), has shown there are many anomalies of the structures in the region of the cystic duct. Maingot (Post Graduate Surgery, Vol. 1), has shown seven ways in which the common duct may be injured in the operation of cholecystectomy.

The Appendix:

One would think the last word had been said on the operation for appendicitis.

An outstanding Chicago surgeon said that any incision other than a McBurney in acute appendicitis raised the mortality 5%. Through a McBurney incision the index finger follows the pelvic wall, and the infected or ruptured appendix is hooked out, so to speak, with the aid of a curved forcep, thus minimizing amount of spread of infection. With a Battle or paramedian incision the first thing that confronts the operator is loops of small intestine, which usually push out of the wound and have to be packed out of the way, spreading the infection among the bowels, and producing the very condition we are so anxious to avoid. Furthermore, many incisional herniae are seen to follow a simple appendectomy where a large incision has been made.

Simple ligature of the appendix stump has been followed by slipping or sloughing with alarming results. I remember being called to such a case. The patient had had his appendix removed in the above fashion and the ligature had slipped. The pelvis was full of blood and faeces. A more careful application of the ligature and the added precaution of a purse-string suture would have obviated this accident. The patient recovered, but at what a risk!

It has always seemed to me that a few minutes extra time spent in a safeguard, which has no possible objection (provided you do not run the needle into the lumen of the bowel when inserting the purse-string), is time well spent and the record of a large series of cases has proved its value.

Spleen:

In the operation of Splenectomy, apart from difficult adhesions, there are three possible accidents:

(1) Haemorrhage; (2) Injuring the stomach; (3) Injury to the Tail of the Pancreas.

Ligature of the pedicle of the spleen must be done with great care. The three clamp method of Fedoroff, if the pedicle is not too large, is satisfactory. As the veins are extremely friable the clamps should be free of sharp edges. One clamp is applied close to the spleen to prevent spilling of blood from the spleen itself. Proximal to this, leaving a sufficient space for cutting the pedicle, two clamps are applied with a small space between. The spleen with the first clamp is now cut away. The ligature is applied in the crushed groove of the most proximal of the two remaining forceps on the pedicle. The distal forcep is loosened while the ligature is being tightened but is kept in control of the pedicle because, should the ligature break, control of the pedicle would be lost and the catastrophe you were trying to avoid would be upon you. I have known of such a fatal haemorrhage to occur where this precaution had not been taken in applying a ligature to the renal pedicle.

Another useful method is that of applying a clamp with rubber tubing on the blades to control bleeding, but not to crush the pedicle, and then ligating the vessels on the distal side of the clamp in separate bundles before removing the spleen. The clamp is removed and the stump inspected to make sure hemostasis is complete.

The left border of the stomach and the tail of the pancreas are at times so involved in the Splenic pedicle and so deep in the hilum of the spleen that they are in danger of injury.

On one occasion in removing a spleen I buttonholed the stomach and I heard W. J. Mayo once relate having removed a portion of the tail of the pancreas in performing a splenectomy. These accidents are not serious if attended to at once, but if the possibility of such anomalous conditions being present is kept in mind I think they can, by more careful inspection of the components of the pedicle, be avoided.

Lister revolutionized surgery by the introduction of antisepsis, but since his day no startling advances have been made. Many improvements have been developed but the elimination of errors has probably advanced surgery in the broad sense as much as any new developments. Undoubtedly we learn much from our own mistakes but the wise learn from the mistakes of others.

Editorials and Association Notes

Manitoba Medical Review

ESTABLISHED 1921

WINNIPEG, APRIL, 1942

Published Monthly by the

MANITOBA MEDICAL ASSOCIATION

Canadian Medical Association, Manitoba Division

Editorial Office

102 MEDICAL ARTS BUILDING, WINNIPEG

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War Benevolent Fund

In these days of war and sacrifice many appeals are made to all of us to assist those who, through no fault of their own, find themselves in dire circumstances. The Canadian Medical Association, at its last general meeting, approved of one other such appeal and your local Manitoba Medical Executive, after due deliberation feel that every doctor in Manitoba should be made familiar with the existence of this Fund and its objects.

The Fund is known as the "War Relief Fund of the British Medical Association." The purpose of the Fund is defined as the temporary assistance of registered medical practitioners and their dependents who find themselves in financial straits as a direct result of war conditions. Applicants must be registered members of the medical profession domiciled in the British Isles and such of their dependents as the Committee may determine. Assistance takes the form of a gift or loan free of interest or may be given partly as a gift and partly as a loan. The Fund is administered by a Committee representative of the British Medical Association and the Royal Colleges. Administration expenses are kept very low as the cost of all expenditures connected with the collection of funds is defrayed without charge by the Association.

Already some £30,000 has been collected and dispersed and with the expectation of repeated mass attacks by bombing much more will likely be required.

We feel certain that every medical practitioner in Manitoba, safe from German onslaught and privileged to go about his daily task without fear or constraint will be glad of the opportunity to contribute to the utmost of his ability to the assistance of his more unfortunate brethren in war-torn Britain. Subscriptions, large and small, will be gratefully received at the office of your Association, 102 Medical Arts Building, Winnipeg. Kindly make your cheques payable to the Treasurer, Manitoba Medical Association and mark them "For War Benevolent Fund."

Letter from Dr. Day re Toxoid Administration by City Health Dept.

There has always been some controversy about the free immunization of children by the Public Health authorities.

That diphtheria can be stamped out of any community by careful and continuous immunization of its population is a proven and accepted fact.

No wonder, then, that health authorities aim at this happy state. The Medical Officer of Health in any community could wish that all individuals needing toxoid against diphtheria should get it privately, and early in life. The facts are that about 800 to 1,000 children are being immunized annually by private physicians in Winnipeg. Of these, many are left till school age, which is far from the best age to do this job. This leaves 2,000, more or less, annually, unprotected against diphtheria, which is a mildly endemic disease in Winnipeg.

Some doctors are successful in immunizing nearly 100% of their private patients while they are still infants. This goes to prove that the profession could do more if they were not so reticent about urging their patients to have this service. The large number of unimmunized children go to prove that there is a failure somewhere.

It has been proposed to the Medical Officer of Health that the Public Health authorities refrain from immunizing children under two years of age. There are exceptions which, in all justice, must be admitted: 1, the obviously poor; 2, those who insist on this service.

Certain private practitioners who have considered this proposal have been in agreement with the two year age limit. The Medical Officer of Health wishes to try it and is hopeful that the operation of this rule will entice the private practitioner to a more energetic campaign among the infants of his practice.

That the profession could be more aggressive in respect to this problem is confirmed by a

consideration of the Fire-Fighters Medical Service. This has been in operation nearly two years and only one child has received toxoid through this service in that time.

In effect it means this: that the profession are to have a free hand up to two years to immunize their private cases against diphtheria, but after that age the City Health authorities wil have a free hand to canvass those who are left undone.

The hope is that none will be found, and that diphtheria will be eradicated as it has been in other cities for long intervals of time. February 27th, 1942.

O. J. DAY, Medical Director, Child Health Services, City Health Department, Winnipeg.

Brandon and District Medical Association Meeting

At a meeting of the Association held in the Reception Hospital on February 25th, 1942, Dr. George Little gave a lecture and demonstration on "Electric Shock Treatment." He pointed out that this stock method of treatment was preferable to Metrazol for the following reasons: 1. It was more economical; 2. Absence of fear reaction as the patient loses consciousness immediately and has no memory of the seizure; 3. No difficulty in veins sclerosing. This treatment was carried out in depressive reactions where on the whole the results have been excellent. Three patients were given the treatment, a convulsion being produced in each case. One interesting case was an Eskimo who, prior to the treatment was in a stuporous condition, and who following treatment was bright and jovial.

The second paper presented was "Medical Experiences in an Internment Camp" by Captain A. A. Klass, Officer Commanding Brandon Military Hospital. Captain Klass pointed out that internees and prisoners of war received good treatment both in Canada and Germany. In all cases where the arrangement was bilateral, this was the case, but in a country such as Poland where the country itself had been completely put out of the war, the nationals of that country may not receive good treatment. The camps in Canada and Germany were inspected by the nationals of a neutral country, in this case Switzerland. The Swiss were entitled to visit camps at any time and send uncensored reports to the country concerned. It was noticed that in one internment camp in Canada that many of the Germans had tracheotomy scars, showing the prevalence of diphtheria in Germany. Another interesting fact is, while the internees were quite free from the recent flu epidemic, the guards, on the other side of the barbwire fence, became victims of this disease. It was noted that the internees gained in weight, receiving the same rations as our soldiers. The

great majority of this group were supporters of the Nazis and they made it very clear to the speaker that one thing Hitler had done was to gear the German nation for war.

Moved by Dr. S. J. S. Peirce, seconded by Dr. F. K. Purdie: that this Association recommend to the Manitoba Medical Association, that the fee for an autopsy be \$25.00 in place of \$10.00 now allowed by the Attorney General's Department. Carried.

The Responsibility of the Doctor under the Provisions of the Opium and Narcotic Drug Act and Regulations

The Council of the College of Physicians and Surgeons, Manitoba, urgently requests that every prescribing physician will read this article with care and consideration. A number of druggists and at least one physician have already been fined \$200.00 for infraction of these orders, which are designed to prevent our diminishing stocks of narcotics, particularly Codeine.

The Department of Pensions and National Health, responsible for the administration of the Opium and Narcotic Drug Act, issued under date of September 14th, 1939, official circular N-227, giving notice of a Regulation by order of the Governor-in-Council under the authority of the War Measures Act, whereby the Government has decided to drastically restrict the manufacture of Codeine preparations containing other medical ingredients, and thus render directly available for the sick people of Canada, or animals requiring same, the supplies of straight Codeine now normally in stock, only upon issuance of a medical, veterinary or dental prescription.

That from the date of the receipt of this advice of these Regulations, retail druggists can only sell,

- (1) straight Codeine, whether in powder, tablet or liquid form, and
- (2) medicinal preparations containing any quantity of any of the narcotic drugs mentioned in Parts I and II of the Opium and Narcotic Drug Act,

upon the signed and dated order of a physician, veterinary surgeon or dentist whose signature is known, or if unknown duly verified before the order is filled, and such order can only be filled once. In other words, everything with a narcotic content, including Codeine, can only be sold on prescription in precisely the same manner as hitherto obtained in relation to straight Morphine. Paregoric, for example, comes within that category. This means that the prescription must be dated and signed by the physician and must be in the hands of the dispensing chemist before it can be filled.

Circular Issued to Physicians in Canada

A circular addressed to the physicians in Canada was issued under date of March 3rd, 1941, by the Deputy Minister of the Department of Pensions and National Health, relative to the use of narcotic drugs and concerning the provisions of the Opium and Narcotic Drug Act and the Regulations thereunder, from which is quoted the following:

"Specific complaints have been made in relation to the activities of this Department in enforcing the law, that many physicians insist upon 'telephoning in' their narcotic prescriptions to drug stores and want them filled before the written order is in the druggists hands. If the druggist fills such a telephonic order, he commits an offence under the Opium and Narcotic Drug Act, while under the War Measures Act Regulations the liability is extended to prescriptions involving Codeine and its preparations.

Equally specific complaints have been made that certain physicians, upon being informed by the druggists that telephone prescriptions could not legally be filled, have not hesitated to threaten such druggists that they would send their business elsewhere if their telephoned prescriptions were refused. The Department of Justice has ruled that in such circumstances "the physician would be a party to and guilty of an offence by virtue of Section 69 of the Criminal Code," which relates to aiding, abetting or counselling. We feel sure that it is only necessary to mention this matter to ensure the cessation of the practice complained of."

Canadian Medical Association Annual Meeting Jasper Park June 15 to 19, 1942

Very attractive railway and hotel rates have been arranged. The fare from Winnipeg to Jasper and return, including standard lower berth and four days' room and board at Jasper Park Lodge, will be \$84.45.

Passengers from east of Winnipeg may avail themselves of the triangle trip at a very low price.

Within the Park itself there are many special features, such as bus trips, car trips, to the various scenic points, etc.

The Ladies' Committee has been very busy and an extensive programme has been made out in which the opportunities of Jasper Park are being emphasized. Arrangements are being made for tennis, boating, swimming, golfing, motor trips, etc.

Obituary

Dr. R. D. Ferguson

Dr. Robert Dickson Ferguson, who practiced at Pilot Mound for 45 years, died at his home on March 2, full of years and honors. Born in Melrose, Ontario, in 1866, he came to Manitoba at 16 and graduated from Manitoba Medical College in 1897. During the last war he served overseas. After the war he continued to practice at Pilot Mound with the assistance during the last two years of his adopted son, Dr. W. H. F. O'Neill. Dr. Ferguson was mayor of the town for several years, medical health officer for many years, an elder of Knox United Church and patron of the Canadian Legion. Gardening was his hobby. He is survived by his widow and two foster children, Miss Norah O'Neill, Toronto, and Capt. W. H. F. O'Neill, R.A.M.C., now at Angler, Ont.

REPORT ON SEARCH OF **WORLD'S MEDICAL** LITERATURE PERTAINING TO INTESTINAL OBSTRUCTION

This Important Paper, by Bernard Fantus, M.D., and Geza Kopstein, M.D., reports an extensive search of the world's medical literature to ascertain whether the records disclose any foundation for an assumption that there is a relationship between bran and intestinal obstruction. The conclusions of the authors, based on 75 cases analyzed, are given below:

- "In a review of the world's literature on bran impaction in the bowel, only four actual cases of this kind could be discovered. In three of these the impaction was preceded by gross intestinal pathology. The fourth case (Davis) is not sufficiently well described to permit of analysis as to its nature; but predisposing cause was probably present.
- "2 Bran is obviously not likely to produce intestinal obstruction unless an organic predisposing cause is present.
- "3 In the presence of intestinal ulceration, stenosis, or disabling adhesions, the administration of bran is contraindicated."

FREE reprints of this and other papers on this subject from scientific journals are now available to all members of the medical profession.

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- Does Bran Produce Intestinal Obstruction?
 Drs. Fantus-Kopstein.
 American Journal of Digestive Diseases, Vol. VII, No. 2, February 1940.
- ☐ I would like to receive reprints of other published papers on this subject.

Doctor

Winnipeg Medical Society

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MEETINGS Third Friday, each month Next Meeting April 17th MEETINGS Start exactly at 8:15 p.m.

NOTICE BOARD

The other day I had a unique and not unpleasant experience. I was asked to play the role of a film censor. Not only did I have a chance to see a picture free—something that strongly appealed to my national sense of economy—but I also found myself enjoying the Olympian prerogative of deciding whether or not others might be allowed to see it.

The film was entitled "The Birth of a Baby." It tells the story of a young matron who thrills to the thought that "the most wonderful thing in the world" is about to happen to her. She takes her suspicions to her doctor and on the screen we see directly or by inference the steps he takes to confirm her suspicions. In a remarkably large laboratory he checks blood and urine and takes a W.R. He then explains things to her and answers her questions. At intervals thereafter the visit is repeated. By means of charts and diagrams she is shown what is happening, and likely to happen, to her insides, and so on to the Great Moment.

The confinement is to be at home and so to the house goes the nurse to see that everything will be in order and in readiness. The nurse, by the way, is definitely ornamental and exceedingly useful. She runs the office by day and, apparently, helps with the confinements at night—at least she does so in this case.

"Came the dawn" of the great day. Doctor and nurse get to work. Everything is done according to Hoyle, or rather according to Delee. Diagrams show the audience what is happening in that sheet-shrouded invisible uterus. The oscil. dilates, the head descends and then follows a sequence of moving photographs. The head presents, it is crowned, it is delivered, it rotates. Then comes the shoulders and so, to slow music, a New Life is born. The subsequent post-natal care is then illustrated and the picture closes with the happy family locked in a tender embrace.

We are shown glimpses of less happy women. There is one who doesn't want a baby and asks the doctor "to do something." She has the dangers of abortion explained to her. Then there is the woman whose indifferent and unkind husband keeps her in a state of continual pregnancy. And there is the woman who won't call the doctor till the last moment and who finds herself eclamptic. In the latter two cases the doctor talks very frankly to the husbands.

The picture is well done. It may not be necessary but it is not offensive and may even be desirable. It would serve completely to disabuse any adolescents, if any such exist, who still think in terms of little black bags and cabbages and storks. And it should be helpful to those about to be, or recently, married.

The acting was excellent. The doctor (name not given) played his part so well that we just knew that he must have graduated from Warner Brothers. In fact, for aught I know, he may have been the great Dr. Kildare himself. And the picture was kept on a high ethical plane—all through it there was no mention of a fee!

After the showing came the verdict. Dr. Marguerite Swan was definitely thumbs down. Dr. Elinor Black and Dr. Brian Best were definitely thumbs up. Dr. Kobrinski overcame his earlier objections and ultimately approved. Dr. Kitchen and myself kept our thumbs horizontal. If such a picture must be, then this was all right. But is it

desirable that people should be instructed, regarding their health, by picture shows? Are doctors so indifferent or so ignorant that they must be prodded by the lay press and by the movies into doing what is proper? The thing to impress upon the public is this: If you don't feel well, go to your doctor and get your instructions from him. People hear and read so much about their health that they are being driven into a state of morbid health consciousness. Like skill-less mechanics they apply their dangerous little smattering of imperfect knowledge to the adjustment of a machine most infinitely complex. They make a fetish of health and seek after it as if it were rare and unusual instead of natural and normal. The thing they have, they lose by worrying. Verily "of all pursuits the pursuit of health is the most unhealthy." What are doctors for, anyway?

"Of all pursuits," let us repeat, "the pursuit of health is the most unhealthy," and health through diet is the pursuit of many. Some extremists, whose menus might find favour with rabbits or monkeys, succeed only in filling themselves with wind and self-righteousness. There are others, at the other end of the scale, who affirm that all you need to do is follow the dictates of a God-given appetite. Undoubtedly these latter would be right, if the foods available were as honest and natural as the appetites. The fact is that these days of dangerous living are days also of dangerous eating. At great expense, manufacturers have succeeded in ruining our food. At further great expense, scientists have discovered how it has been ruined. To complete the cycle, we can now purchase expensive chemicals which, when added to our diet, will give us almost as good nourishment as the untampered-with food. Sic tempora, sic mores.

It would seem that the dust and ashes to which once useful foods have been reduced, are threatening to reduce our race to the same state. The figures of nutrition experts are appalling. During his recent visit, Dr. Russell M. Wilder of Rochester impressed upon several large audiences, both lay and professional, many significant facts about the extent and the effects of dietary deficiencies. Of particular interest was his description of an experiment in which subjects were deprived of only one essential—thiamin—but who revealed as a result of that single lack, a large number of most varied symptoms. The luncheon under our auspices was largely attended, a fact which pleased and impressed Dr. Wilder. On the day after a public meeting he told me that he had had three telephone calls that morning from women who wanted him to give diets to their children. One of them began by saying, "I saw your ad. in the paper." Incidentally we have to thank Dr. Kitchen for securing Dr. Wilder's presence for us.

A King, some centuries ago, standing by the bedside of his distracted Queen, turned to his physician and asked: "Canst thou not minister to a mind diseased; Pluck from the memory a rooted sorrow; Raze out the written troubles of the brain, And with some sweet oblivious antidote, Cleanse the stuffed bosom of that perilous stuff, Which weighs upon the heart?" Many a time since then has that question been asked to the doctors' embarrassment.

In the presence of those who labour under the mysterious and awful afflictions of the mind, one is almost ready to accept the scriptural etiology of possession by devils. There was a time when that was the firm belief.

Then, treatment consisted of the unmerciful beating and burning and torturing of those poor wretches whose sad bodies were believed to be tenanted by unclean spirits—tenants that could be driven forth only by force. Nowadays there is a kindlier attitude towards those unfortunates, and much is being done to answer Macbeth's question with a "Yes."

Just how this better state of affairs is being brought about will be told by Doctor A. Pincock, Medical Supervisor of the Brandon Mental Hospital in his paper, "Modern Treatment of the Insane" to be delivered at the meeting in April.

At the same meeting we hope to have Dr. Speechly tell us about his experiences as a student and practitioner. Dr. Speechly was a classmate of Lord Dawson, Sir Wilfred Grenfell and Dr. J. H. Sequeira. Indeed they, with himself, were the four prize winners of his class. He has seen nearly every advance made in medicine for half a century, and, in this country, was a pioneer. Therefore his talk should be full of interest.

Dr. Speechly represents the Past, Dr. Pincock the Present, and Dr. Rice will deal with the Future. Dr. Rice has been constructing an Electroencaphalograph which he will demonstrate. Its use at the moment is not great, but what the future of it may be is unpredictable.

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We are told of Petrarch that he said there were no good women, only some were worse than others. Unlike Petrarch's women, our meetings are all good, only some are better than others, in which latter category comes the meeting on March 20th. In the audience were a number of doctors from out of town (one made a special trip of over 200 miles in order to attend) and everyone was well pleased.

Dr. Hunter spoke upon common errors in medical practice and told how these errors could be avoided. Dr. MacLean dealt with surgical mistakes in a similar helpful way. There were many young men in the audience to whom these papers made a special appeal and who after the meeting were loud in their expressions of appreciation. "Light your torches at the fires of the ancients" was Rokitansky's advice to the students of his day and the advice still stands, although neither Dr. Hunter nor Dr. MacLean are "ancient"—far from it.

Dr. Gibson did not give his paper. Instead he very generously insisted that the audience be given an opportunity to see the excellent colored films of Dr. A. C. Duncan. Dr. Duncan graduated here in 1931 and has spent several years in the Yukon. With him as conductor we spent three-quarters of an hour in the air over the winding rivers and forbidding peaks through which will soon be threading a new Burma Road. The amusing comments of the conductor added greatly to our enjoyment of the "tour."

After the programme Dr. Kitchen made a reference to the latest questionnaire. (These things are getting bigger and tougher than ever!) He dealt with the famous—on infamous—item No. 12. It seems pretty clear that the acceptance of this item, or article, will end something though what it will end is not so apparent. The specialists believe that if this goes through, the general practitioners will have them "by the tail." On the other hand, some of the general practitioners think that the specialists will have THEM in the same embarrassing position. If both are correct we will have a sort of Ringling Elephant Act.

The fact is that a questionnaire so important could stand a special meeting. Its results will be the basis for health insurance legislation, and socialized medicine is coming, just as surely as tomorrow's dawn. As we sow now, we, and those who follow us, will have to reap. We should see to it that the seed is well winnowed and all possible tares excluded. Anyway—so far as Article 12 is concerned—the proper answer would appear to be "no."

To most of the members "The Executive" consists of the five officers elected at the annual meeting. As a matter of fact, that is only a small part of a large committee. In addition there are the presidents of the previous two years—Dr. Digby Wheeler and Dr. Fred. McGuinness—and the trustees elected at the same time—Dr. A. E. Deacon, Dr. E. Johnson and Dr. A. Leishman. Then there are the members of committees. These are nominated by the President, and the present personnel is as follows:

Programme—Dr. L. A. Sigurdson and Dr. F. G. Allison. Legislative Committee—Dr. W. E. Campbell.

Membership—Dr. W. R. Gorrell, Dr. S. Rodin, Dr. A. T. Gowron.

Public Health—Dr. J. E. Tisdale.

Library and Publication-Dr. Dan. Nicholson.

Economics-Dr. F. D. McKenty.

Other nominated members represent us in various bodies, thus:

Manitoba Medical Association—Dr. Ross Mitchell.

Members on Committee of Twelve for C. P. & S.—Dr. C. M. Strong, Dr. O. S. Waugh, Dr. W. E. Campbell.

Representatives to the Central Council of Social Agencies—Dr. S. Kobrinsky, Dr. Margaret Owens, Dr. V. F. Bachynski.

Representatives to the Manitoba Hospital Service Association—Dr. A. W. Hogg, Dr. A. Hollenberg, Dr. W. F. Abbott.

We have also representatives elected by their sections, thus:

Hospital Section-Dr. H. F. Cameron.

Eye, Ear, Nose and Throat—Dr. Robert Black.

Obstetrics and Gynaecology—Dr. F. G. McGuinness.

Medical History Club—Dr. J. C. Hossack.

These are the men who have had the responsibility of caring for your affairs during the current session.

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You Get What You Pay For

Capping a half century of radical law-making, the New Zealand Parliament is now considering a bill to limit doctor's fees to \$1.25 per physician's visit. The state is to pay medical fees for the people and the doctor will collect from the government, not the patient.

New Zealand will pay the doctor a dollar and a quarter and that means that eventually the doctor's services will be worth no more than one dollar and twenty-five cents. When the present generation of competent doctors are all dead we may be quite sure that the profession will be manned by bargain-counter docs. Laws may regulate a doctor but no laws can compel a competent man to become a doctor. We trust that there will be enough horse doctors in New Zealand to take care of the asinine population that must be increasing rapidly under Herbert Spencer's formula: "The net result of passing laws to protect fools from the consequence of folly is to fill the world with fools."

—Editorial reprint from Chicago Daily News, Issue of September 10, 1941.



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Personal Notes and Social News

Dr. and Mrs. Robert Black attended the Dominion Curling Championships at Quebec City. En route home they visited Montreal, Ottawa and Toronto.

Dr. Irvin O. Fryer's medical rink won the primary competition in the University of Manitoba Alumni Bonspiel. Personnel of the rink was Dr. Fryer, Dr. F. G. McGuinness, Dr. Guttman, M. Burns.

Dr. Harry Medovy is now on the standing medical board, R.C.A.M.C. at Fort Osborne Barracks, with the rank of Captain.

Dr. John McCrae Kilgour, '36, received the qualification of M.R.C.P. London recently. Only two others from Canada were successful in this examination.

Dr. and Mrs. S. Kobrinsky have returned

from Quebec City and other Eastern Canadian centres where they were visiting.

Word has been received of the birth of a son to Dr. and Mrs. J. L. LaCroix of 45 Regent Court, Sheffield, England. Mrs. LaCroix was formerly Mary Stephens, daughter of Dr. and Mrs. George Stephens.

Congratulations are being received by Dr. and Mrs. W. J. Elliott Jr. of Brandon, Man., on the birth of a daughter (Elizabeth Jane) at Brandon General Hospital, March 10th.

Dr. W. F. Evelyn of Stonewall, Man., has been appointed municipal physician for the town of Stonewall and the municipality of Rockwood.

Dr. A. W. McCullough is attached to No. 3 Casualty Clearing Station as Radiologist.

Dr. and Mrs. J. H. Moir of Gods Lake, Man. are receiving congratulations on the birth of a daughter (Sharon Ann) March 11th, at Winnipeg General Hospital.

Dr. W. H. S. East has joined the R.C.A.M.C. and at present is stationed at Fort Garry.

Dr. John Gemmell, late Resident in Medicine, Winnipeg General Hospital, is now with the R.C.A.M.C. at Fort Osborne Barracks.

Dr. T. J. Brownlee of Russell, Man., recently came to Winnipeg to join the R.C.A.M.C.

Dr. E. I. Ostry of Whitemouth, Man., is attending the School of Hygiene, University of Toronto, where he is taking a course in Public Health.

Dr. M. H. Ivens, '35, of Waukon, Iowa, was a recent visitor to Winnipeg.

Dr. S. Malkin, formerly of Pine Falls, is now with the R.C.A.M.C.

Dr. J. M. Sigvaldson, formerly of Shoal Lake, Man., is now on the staff of the Sanitorium at Ninette.

Dr. S. H. Corrigan has recently arrived in Winnipeg from Lampman, Sask.

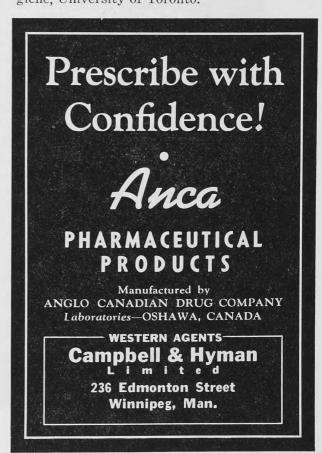
Dr. and Mrs. J. S. Matheson of Brandon, Man., have returned from a four-month holiday spent at the Pacific Coast.

Capt. J. B. Cram, R.C.A.M.C., has been appointed medical officer of the 100th Basic Training centre at Portage.

Dr. C. V. McClelland is now located at Dominion City, Man.

Dr. M. C. Bridgeman, formerly of Sachigo River, Ont., is now located at Oliver, B.C.

Dr. C. E. Mather of Wawanesa, Man., is taking a Public Health course at the School of Hygiene, University of Toronto.





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LITERATURE ON REQUEST

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MONTREAL CANADA

Department of Health and Public Welfare

"An Effectual City Milk Control Programme"

We are publishing herewith the ninth of the essays prepared by the medical students before taking the final examination in Preventive Medicine at the Faculty of Medicine of the University of Manitoba last year. The one for this month is written by Dr. O. A. Schmidt on the subject "An Effectual City Milk Control Programme," and reads as follows:

Milk and its modifications have at no time presented as great a problem as they have within the past few decades. This coincides with the advent of bacteriological studies which have revealed the true significance of milk as a medium for the spread of infection, endemic and epidemic. Repeated investigation has proven the efficiency of milk as a culture medium, has differentiated the organisms transmitted, has revealed the various sources of contamination and has outlined those methods satisfactory and practical for the purification of milk and in this way the minimization of disease spread. With this material at hand, the necessity for an effectual milk control programme in any community, rural or urban, is readily recognized. The establishment and maintenance of such a programme is especially essential in a city, but the general cognization of this fact has been retarded because of considerable controversy by those either uneducated or non-understanding. It is therefore necessary in the construction of an effectual programme to have an educated and understanding government body before it can be considered. Given such a group of people, the only other prerequisite for such a programme is the formation of a milk control board, which has the duty of governing all aspects of milk, its production, transportation, modification as dairy products, and its consumption.

A milk board, or commission, has the problem of establishing "definite standards for milk, and enacting such ordinances or laws as are necessary to enforce them" (Perkins). This requires the presence of several members, divisible essentially into two main groups, namely, that group responsible for the construction of suitable standards, and those responsible for their maintenance. The following representatives must therefore form such a commission. A member of the local department of health must be present to maintain co-operation between the board and other departments whose jurisdiction may affect milk; for example, the water-works or sewage departments. The formation of a model scheme of legislation, with set regulations regarding licensure, retail prices, etc., is dependent upon an individual department requiring representation. Sanitation of dairies, veterinary inspection of herds, medical supervision of employer and employee, laboratory investigation, bacteriological and biochemical, are also subdivisions requiring representation. And with such an able and co-operative group of men, the city milk control board, the establishment of absolute standards as to bacteriological and biochemical components, supervision of dairy methods and distribution of milk and dairy products is possible, thus guarding the consumer from that ever-impending factor, disease.

The final product must achieve certain standards, by cteriological, chemical and physical, and it is these which govern regulations regarding sanitation in dairy and in transportation. Bacteriological studies have revealed the organisms responsible for infection. The presence of tubercle bacilli, diphtheria, streptococcal infections such as streptococcal sore throat and scarlet fever, has indicated human infection, Boucella abostus, tuberculosis and other animal infection, thus necessitating the formation of departments for medical examination of those handling milk, and veterinarian inspection of milk. Also bacterial counts have been valuable as a criteria for gradation of milk and have revealed sources of contamination. Biochemical studies have established the percentage of components necessary in milk and have shown the presence and source of adulteration or sophistication, as well as constructed tests to measure age, etc. of milk. And physical tests, as for

dirt, have also been devised. Thus, through the investigation of several departments, the problems of others are revealed.

To begin with, all animals whose milk is being sent to consumers in any community require complete examination by qualified veterinarians routinely at periods of three to six months. This includes tuberculin-testing, general examination, especially of udder and teats, which may be infected with streptococci or virus, and any other examination considered necessary. These men must have qualification and permission to remove or destroy all tuberculin-positive animals and to segregate animals with local or systemic disease.

Routine examination of employer and employee, done at definite periods, is another absolute standard to be maintained. X-ray of chest for tuberculosis, throat and nasal smear and culture for diphtheria and streptococci, and stool and urine examination (and occasional gall bladder drainage), for typhoid and allied infections are indicated. The presence of any of these organisms makes it necessary for the individual to discontinue working either entirely or until these have been eradicated. The human carrier is a menace to humanity and must be annihilated.

Most important is the problem of sanitation, which is divisible into that at the site of milk production, milk transportation, and the problem of bottling and prepara-tion of dairy products. Rosenau has stressed this in his statement: "an efficient inspection service is a preventive measure that strikes at the root of milk prob-lem." A competent method of inspection of dairies is essential, and one of the most instructive and useful is the method of scoring, which takes into consideration surroundings, technique of milking and of shipping. Adequate housing of cattle, with cleanliness, readily removable manure, proper bedding, good ventilation and lighting, proper, sufficient feeding and watering, with large, suitable pastures, are necessary for the maintenance of health of cattle. Proper milking tach maintenance of health of cattle. Proper milking technique diminishes the bacterial count of milk, and depends upon several minor details, clean udders, teats and body of cows, clean dry hands, well sterilized uten-sils and strainers, and methods of covering. No dairy is complete without a milk house or room isolated from the stables, and a method of cooling milk and sterilizing containers. Milk should be cooled to $50\,^{\circ}\text{F}$. almost immediately after milking, should be placed in containers with small tops, with suitable methods of closure, and should be transported in these at a temperature of 50°F. (not frozen) to a dairy for further preparation prior to consumption. This much for the milk farm.

Inspection of dairies where bottling, etc. occurs, is the next phase. Here milk should undergo several tests on being transported into the plant. First bacterial count on nutrient agar maintained at 37°C. for 48 hours should be done on the milk from dairy farms at definite intervals. Secondly the methylene-blue test for fermentation should be routine (value is doubted), and thirdly the "dirt test," straining milk, should be done. As well as these the estimation for butterfat, never less than 3.5%, and total solids never under 12% is necessary to prove the presence of adulteration or sophistication. Milk with a cell count of less than 10,000, methylene blue reduction after 5½ hours, and from tuberculin-negative cows may be distributed as certified milk, but preferable to this is the process of pasteurization, which should be done on all milk sold to consumers as milk or dairy products. This consists of heating milk to a temperature of 142-145° for half an hour (other methods

such as the flash method, up to 158°F. momentarily) and then immediate cooling to 50°F. The proven value of pasteurization from the viewpoint of diminution of milk-spread infection has offset the arguments such as destruction of vitamins, altered milk digestibility, disturbed cream line, and impending carelessness of the formers, but not entirely. Pasteurization of milk does farmers-but not entirely. Pasteurization of milk does not mean that all milk can be accepted; definite criteria are necessary, namely, a bacteria count below 50,000 in five hours, and below 100,000 in winter and 200,000 in summer in 24 hours. And pasteurization must be carefully checked by culture methods, having a count of only 10,000 or less following pasteurization. It is important that not only milk, but cream, butter, ice-cream and other dairy products receive as careful scrutiny.

No less attention should be given to methods of distribution to the consumer. Bottling must occur under sterile technique, the bottles having been sterilized with steam; and air-tight closure with satisfactory bottletops is important. Milk must be maintained at a temperature of 50°F. up to the time of delivery in an effort (or a necessity) to maintain a bacterial count below 10,000 colonies per cubic centimeter of milk. And at no time must the milk be sold in bulk form. And once the consumer has received his milk the matter is no longer in the hands of a milk-control commission.

The matter of licensure and education of dairymen is an important function of the milk board. A license can be issued only to those who maintain the standards as to cleanliness, and whose milk has a satisfactory bacterial count, and is susceptible to cancellation if these are not kept. Dairymen should possess a certificate indicating examination by a group of medical examiners. Dairies can be closed (or should be compelled to close) if dairying methods are unsatisfactory. And especially a set price for producer should be established as well as for consumer, so as to prevent underselling with its detrimental effect upon quality.

To recapitulate, an effectual city milk control programme depends upon the formation of a commission which has definite standards by which to estimate the quality and cleanliness, physical and bacteriological, and to maintain certain essential requirements. These are healthy tuberculin-tested cows, healthy personnel, clean surroundings, clean containers, immediate chilling of milk, clean storage, adequate transportation, sterilized dairies, pasteurization followed by rapid chilling, sterile bottling and adequate rapid means of distribution. These, with laboratory aids to control them, good sanitary code with good milk laws plus a system of licensure, inspection and education, form the basis, liable to modification, of a programme constructed for milk purification.

References:

Rosenau-Preventive Medicine. Boyd. M. Perkins-Cause and Prevention of Disease.

COMMUNICABLE DISEASE REPORT

January 29 — February 25

Measles: Total 757—Winnipeg 274, Portage la Prairie City 105, Brandon 57, Transcona 54, Portage la Prairie Rural 31, Norfolk North 30, St. Vital 25, St. James ie Kural 31, Nortolk North 30, St. Vital 25, St. James 24, Unorganized 24, Shoal Lake Village 22, Argyle 13, Fort Garry 9, Assiniboia 8, Bifrost 8, Tuxedo 7, Selkirk Town 6, Rockwood 4, Wallace 4, Cypress South 3, Lansdowne 3, Cameron 2, Dauphin Town 2, DeSalaberry 2, St. Boniface City 2, Winchester 2, Arthur 1, Brooklands Village 1, Flin Flon 1, Gimli Rural 1, Hamiota Rural 1, Kildonan East 1, Kildonan North 1, Miniota 1, Pipestone 1, Tache 1, Virden Town 1, Wa-Miniota 1, Pipestone 1, Tache 1, Virden Town 1, Wawanesa 1, Westbourne 1. (Late Reported: St. Vital 11, Portage la Prairie Rural 4, Bifrost 2, Shoal Lake Rural 2, Argyle 1, Brandon 1, Rivers Town 1, Strathclair 1).

Mumps: Total 508— Winnipeg 158, Tuxedo 83, Brandon 63, Fort Garry 37, Kildonan West 35, Minnedosa Town 17, Selkirk Town 16, Hamiota Village 12, Brooklands Village 10, St. Boniface City 9, Wallace 8, Dauphin Town 7, Transcona 6, The Pas 5, Virden Town 5,

Portage la Prairie City 4, Pembina 3, Sifton 3, St. Francois Xavier 3, Cypress South 2, Stonewall Town 2, Whitehead 2, Daly 1, Hillsburg 1, Kildonan East 1, Norfolk North 1, Roblin Village 1, Rockwood 1, Springfield 1, St. James 1, St. Vital 1, Unorganized 1. (Late Reported: Daly 2, Sifton 2, Brandon 1, Norfolk North 1, The Pas 1, Wallace 1.)

Chickenpox: Total 300—Winnipeg 146, Brandon 29, St. Boniface City 29, Brooklands Village 17, Kildonan West 17, Minnedosa Town 5, Tuxedo 5, Woodlands 5, Unorganized 4, Whitehead 4, Pembina 3, St. James 3, The Pas Town 3, Flin Flon 2, Hamiota Rural 2, Kildonan East 2, Arthur 1, Brenda 1, Clanwilliam 1, Lansdowne 1, Melita Town 1, Norfolk North 1, Pipestone 1, Wawanesa 1, Portage la Prairie Rural 1, Portage la Prairie City 1, Roblin 1, Ste. Anne 1. (Late Reported: Unorganized 4, Portage la Prairie Rural 3, Brandon 1, Brenda 1, Flin Flon 1, St. James 1, St. Vital 1.)

Scarlet Fever: Total 160-Brandon 69, Winnipeg 29, Fort Garry 15, Tuxedo 12, Strathcona 5, Minto 3, Port Garry 15, Tuxedo 12, Strathcona 5, Minto 3, Portage la Prairie City 3, Flin Flon 2, Miniota 2, Norfolk North 2, St. Boniface City 2, Blanshard 1, Dauphin Town 1, DeSalaberry 1, Dufferin 1, Elton 1, Hamiota Village 1, Montcalm 1, Portage la Prairie Rural 1, Rosedale 1, Selkirk Town 1, Sifton 1, St. James 1, Whitehead 1, Woodworth 1. (Late Reported: Flin Flon 2.)

German Measles: Total 86—Brandon 33, Tuxedo 18, Fort Garry 12, Pipestone 10, Roland 5, Portage la Prairie City 2, Melita 1, St. James 1. (Late Reported: Brandon 3, Portage la Prairie City 1).

Influenza: Total 75—Brandon 62, Winnipeg 3, Portage la Prairie City 2, Birtle Rural 1, St. Vital 1. (Late Reported: Ethelbert 1, Mossey River 1, St. Boniface 1, Kildonan West 1, St. Vital 1, Unorganized 1.)

Tuberculosis: Total 40—Winnipeg 21, Portage la Prairie City 2, Selkirk Town 2, Unorganized 2, Cypress South 1, Daly 1, Dauphin Town 1, Gimli Rural 1, Gilbert Plains Rural 1, Kildonan West 1, Lorne 1, Mossey River 1, Pipestone 1, Rhineland 1, Rockwood 1, Transcona 1, Turtle Mountain 1.

Diphtheria: Total 22—Winnipeg 16, Fort Garry 2, Gladstone Town 1, Lawrence 1, St. Boniface 1. (Late Reported: St. Boniface 1.)

Whooping Cough: Total 21—Brandon 4, Transcona 3, Flin Flon 2, Winnipeg 2. (Late Reported: Flin Flon 6, Brandon 4.)

Lobar Pneumonia: Total 18-Brandon 1, Cameron 1, Lawrence 1, Ritchot 1, Rosser 1. (Late Reported: Riverside 2, Rosedale 1, Minitonas 1, Brenda 1, Gimli Rural 1, Norfolk South 1, Stanley 1, St. Vital 1, Virden Town 1, Kildonan West 1, St. James 1, Unorganiz-

Erysipelas: Total 8-Winnipeg 4, Portage la Prairie City 2, Brenda 1, Dauphin Town 1.

Meningococcal Meningitis: Total 5 — Unorganized 2, Hanover 1, Ste. Rose Rural 1. (Late Reported: De-Salaberry 1.)

Septic Sore Throat: Total 5—North Norfolk 1, St. Boniface City 1, Tache 1, Transcona 1, Whitewater 1.

Encephalitis: Total 4—(Late Reported: Dufferin 1, Carman 1, North Norfolk 1, Portage la Prairie Rural 1.)

Anterior Poliomyelitis: Total 3-Rosedale 1. (Late Reported: Brandon 1, Bifrost 1.)

Typhoid Fever: Total 2-Winnipeg 1. (Late Reported: Rhineland 1.)

Bacillary Dysentery: Total 1-(Late Reported: Unorganized 1.)

Opthalmia Neonatorum: Total 1-St. Boniface City 1. Undulant Fever: Total 1-Winnipeg 1.

Diphtheria Carriers: Total 1-Hanover 1. Typhoid Carriers: Total 1-Hanover 1.

Venereal Disease: Total 122—Gonorrhoea 79, Syphilis

DEATHS FROM COMMUNICABLE DISEASE

January, 1942

URBAN—Cancer 49, Pneumonia (Lobar) 5, Pneumonia (other forms) 9, Syphilis 9, Influenza 7, Tuberculosis 6, Vincent's Angina 1, Lethargic Encephalitis 1, Measles 1. Other deaths under one year 20; other deaths over one year 153; stillbirths 15. Total 276.

RURAL—Cancer 17, Pneumonia (Lobar) 2, Pneumonia (other forms) 9, Tuberculosis 7, Influenza 5. Other deaths under one year 13; other deaths over one year 103; stillbirths 8. Total 164.

NDIAN — Pneumonia (Lobar) 1, Pneumonia (other forms) 4, Tuberculosis 3, Cancer 1. Other deaths under one year 3; other deaths over one year 0; still-births 1. Total 13.

1941 Registrations Received in January, 1942

RURAL—Cancer 4, Tuberculosis 2, Diphtheria 1, Influenza 1, Pneumonia (Lobar) 1, Pneumonia (other forms) 1. Other deaths under one year 7; other deaths over one year 39; stillbirths 3. Total 59.

URBAN—Cancer 1, Influenza 1, Tuberculosis 1. Other deaths under one year 3; other deaths over one year 5; stillbirths 3. Total 14.

INDIAN— Tuberculosis 2, Pneumonia 1. Other deaths under one year 2; other deaths over one year 3; stillbirths 1. Total 9.

Garantota Manitota Jan. 29-Feb. 25	Ontario Jan. 25-Feb. 21	Saskatchewan Jan. 25-Feb. 21	Minnesota Jan. 25-Feb. 21	North Dakota Jan. 25-Feb. 21
Amebic Dysentery			2	1
Anterior Poliomyelitis 1				1
Meningococcal Meningitis 4	27	3		
Chickenpox 288	1610	122	385	
Diphtheria 21	24	1	10	11
Erysipelas 8	7	5	5	
Influenza	61	1	5	112 1
Measles	575 189	$\frac{158}{126}$	2231	453
Mumps 500	1537	940		
Ophthal. Neonat 1				
Scarlet Fever158	1164	154	365	90
Septic Sore Throat 5	2	11		
Smallpox			1	
Trachoma	1			
Tuberculosis 40	184	58	23	24
Typhoid Fever 1	3		2	
Undulant Fever 1	2			1
Whooping Cough 11	309	19	282	82
Gonorrhoea 116	309	†	†	31
Syphilis 68	550	†	†	24
Typhoid Carriers 1				
Diphtheria Carriers 1		1		

Measles, mumps and scarlet fever are on the increase in Manitoba at this time, mild scarlet fever should be watched for in all districts.

We note 21 cases of diphtheria in Manitoba. Considering our small population, this is far from being enviable! The six months to six year age groups must be immunized. Folders regarding immunization campaigns have gone out recently to all Medical Health Officers in the Province. Preventable diseases slow up training of armed forces and decrease production of munitions and supplies. Disease Prevention is always worthwhile and in times like these is absolutely essential.



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